Chapter 4 — Project Implementation

Land Protection Options

No action

Under the no-action alternative, the areas outside of existing protected areas would largely remain in private ownership and subject to changes in land use and/or land cover. Some protection in addition to the SLVCA is likely because of ongoing conservation easement initiatives in the San Luis Valley by public entities such as NRCS and nongovernmental organizations such as The Nature Conservancy and Ducks Unlimited.

Conservation easements and limited fee-title acquisition (proposed action)

It is the Service's policy to acquire the minimum interest in a property necessary to accomplish its conservation objectives. It can be possible to achieve most of these objectives with conservation easements. The preservation of working landscapes such as farms and rangeland is more cost effective, socially acceptable, and politically popular than acquiring fee-title land, and it often promotes the preservation of unfragmented, quality habitat. Under the proposed action, the Service seeks to protect up to 500,000 acres through conservation easements In the SLVCA.

There are instances when the management and objectives of the existing three refuges in the San Luis Valley refuge complex may be simplified with small-scale acquisitions, but not with conservation easements. In such circumstances (e.g., boundary simplification or surface water rights acquisition for an existing refuge) the Service would consider up to a total of 30,000 acres of fee-title acquisition under the SLVCA.

As discussed throughout this document, the SLVCA is a large, landscape-scale approach to conserving a diverse array of important habitats. Each of these habitats is home to different Federal trust species, and each comes with its own management complications related to land use, water use, and other issues. Therefore, if necessary, the SLVCA could be subdivided into multiple management units that could be managed together or independently, based on the judgment of the Service. Natural features to define such management units would be the Closed Basin, the watersheds draining the southern Sangre de Cristo Mountains south of Blanca Peak to their confluence with the Rio Grande, and the watersheds of the remaining tributaries and main stem of the Rio Grande. Conceptual boundaries for these units are identified in Figure 4; however, actual boundaries would be established based upon the needs of refuge management.

Water use has an important influence on the persistence of habitat in the SLVCA, and the protection of that habitat may sometimes require easement stipulations regarding water use and sale of water rights, as detailed in Section 4.2.1. Crafting of the easement language may not be complete until after the SLVCA has been approved. In addition, the need to protect southwestern willow flycatcher habitat has led to a several-year effort by local governments to create the San Luis Valley Habitat Conservation Plan (HCP), a draft of which should be released mid-2012. The Service intends to defer its conservation partners in land protection as it relates to southwestern willow flycatcher habitat when necessary for them to meet their mitigation targets, but until the HCP is final, it would be difficult to ensure that the Service's conservation efforts do not conflict with those of partner organizations. While these issues do not directly affect the prioritization strategy for the SLVCA (detailed in section 4.3), they may influence how the Service implements its conservation delivery. Therefore, the Service's realty staff will focus initial efforts on the southern Sangre de Cristo Mountains and their drainages, where the aforementioned issues are not likely to be concerns.

Project Objectives and Actions

The Service seeks to establish the SLVCA in the San Luis Valley of central southern Colorado and northern New Mexico. The project area contains land in Hinsdale, Mineral, Rio Grande, Saguache, Conejos, Alamosa, and Costilla counties in Colorado, as well as a small portion of Rio Arriba and Taos counties in New Mexico. The SLVCA boundary approximates the headwaters and upper watershed of the upper Rio Grande. Within the project boundary, the Service will

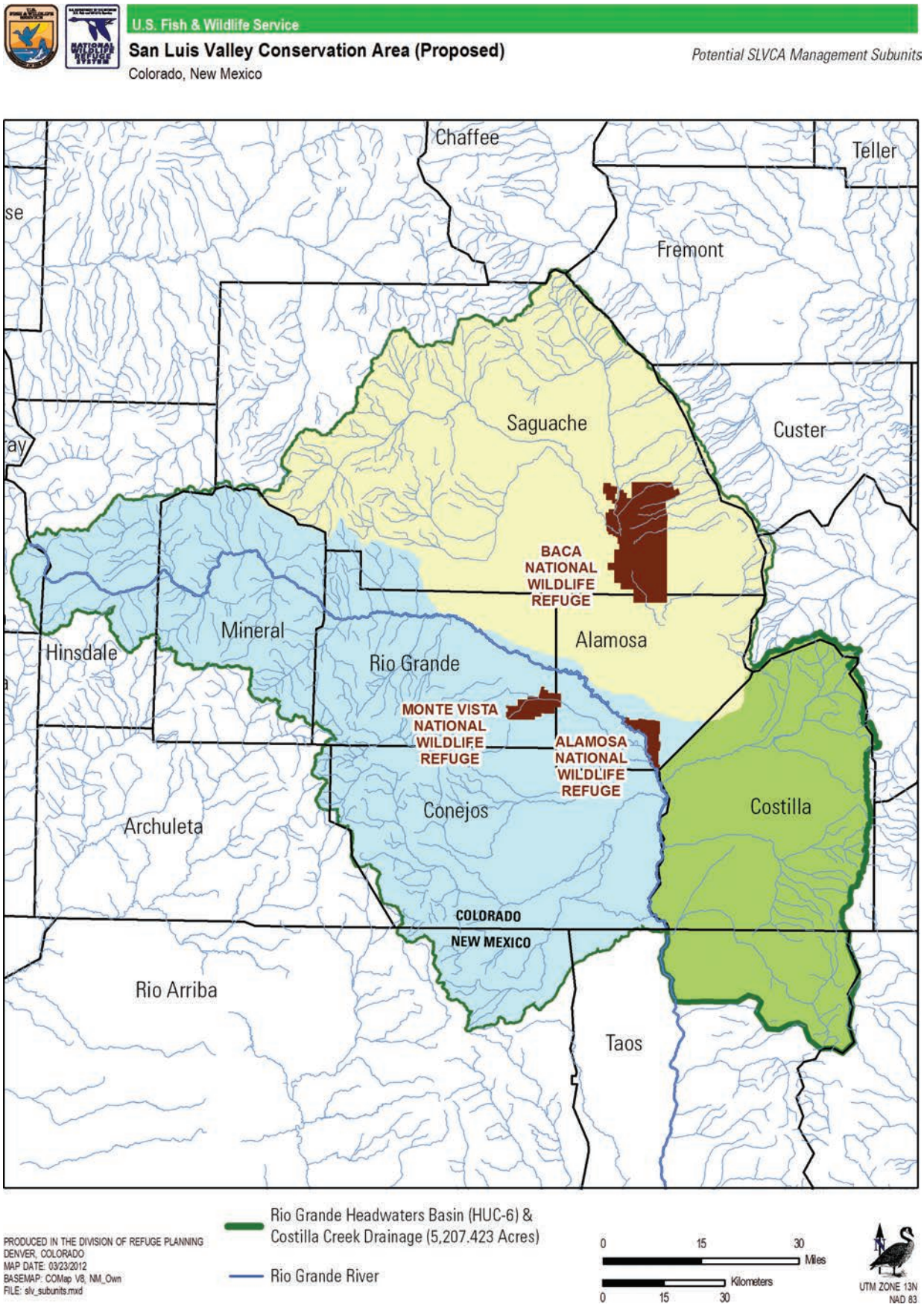

Figure 4. Potential management units of the SLVCA, with the Closed Basin in tan, the southern Sangre de Cristo Mountain watersheds in green, and the remaining Rio Grande watershed in blue..

strategically identify and acquire from willing sellers an appropriate interest in upland, wetland, and riparian habitats on privately owned lands.

The Service plans to buy or receive donated conservation easements or fee-title lands on those identified areas within the project boundaries. These easements and limited fee-title acquisitions will connect and expand existing lands under public and private conservation protection. Based upon the area of privately held priority habitat in the San Luis Valley, the objective of the SLVCA project is to protect 500,000 acres of uplands, wetlands, and riparian areas through easements and up to 30,000 acres through fee title.

Easement Terms and Requirements

The Service has successfully implemented easements in many projects, and existing language and guidelines would contribute substantially to the drafting of the SLVCA easement language. Given the Service's conservation goals in the SLVCA, the easements will be drafted with standard language to preclude subdivision and development and conversion of native vegetation to cropland, as well as to protect existing wetlands from being drained or filled.

In addition, because of the scarcity of water resources in the valley and impending changes to ground water law in the State of Colorado, there would be provisions regarding water use. The types of wetland and associated upland habitats in which we are interested are largely supported by current water use practices. Easements would include a stipulation that changes in water use cannot adversely affect the quality of habitats that we seek to protect in the easements, and that water rights currently owned for use on a property under an easement could not be sold or transferred for use on other properties unless such a transfer was deemed beneficial to wildlife.

The protection of riparian corridors is critically important in the SLVCA, particularly since much of this habitat has, or has the potential to have, the constituent elements of critical habitat for the southwestern willow flycatcher.[1] While easement language would not prescribe specific management practices on these lands, landowners with suitable or potentially suitable riparian habitat would be encouraged to work with the Partners for Fish and Wildlife program or the new Working Lands for Wildlife Program (NRCS 2012) to develop alternative strategies such as fencing of riparian corridors and off-river stock watering to prevent overgrazing of regenerating riparian vegetation.

Contaminants or Hazardous Materials

Level 1 pre-acquisition site assessments will be conducted on individual tracts before the purchase of any land interests. The Service's environmental contaminants specialists from the Ecological Services offices in Colorado and New Mexico will be contacted to ensure that policies and guidelines are followed before acquisition of conservation easements or fee title.

Acquisition Funding

The Service will acquire easements in the SLVCA primarily through Land and Water Conservation Fund monies. These monies are derived primarily through revenue generated from oil and gas leases on the Outer Continental Shelf, motorboat fuel taxes, and the sale of surplus Federal property. Monies in this fund are not derived from general taxes. While Land and Water Conservation Fund monies are intended for land and water conservation projects, funding is subject to annual appropriations by Congress for specific acquisition projects. If it is reauthorized by Congress, the Federal Land Trust Facilitation Act could also be used to fund specific acquisitions. This act is a law that allows the BLM to dispose of certain public lands in order to generate revenue for strategic conservation of habitat not currently in Federal trust.

The SLVCA project area includes several other government and nongovernmental organizations with overlapping conservation objectives. In the development of the SLVCA, we have prioritized land for acquisition by the Service, but our Land Protection Plan may also guide acquisitions for conservation by the NRCS (Wetland Reserve Program), The Nature Conservancy, Ducks Unlimited, and the Rio Grande Headwaters Land Trust, among others.

Protection Priorities

The Service, in consultation with internal divisions (Migratory Birds, Fisheries, Ecological Services), nongovernmental organization partners, Colorado Parks and Wildlife, and BLM, selected eight focal species whose habitat needs have driven the prioritization of the SLVCA. Each of these focal species represents a group of species that are vulnerable to the same threat processes (Lambeck 1997). The species selected were Canada lynx, Rio Grande cutthroat trout, willow flycatcher, Lewis' woodpecker, Wilson's phalarope, American bittern, Gunnison sage-grouse, and sage thrasher. All of these are Federal trust species and/or have State or regional conservation status, making them worthy of protection on their own; however, conserving habitat for these species will also protect habitat for other species with similar habitat requirements.

1 *FR 76(157), 50542-50629. Endangered and Threatened Wildlife and Plants; Designation of Revised Critical Habitat for Southwestern Willow Flycatcher. Agency: Fish and Wildlife Service. Action: Proposed Rule. August 15, 2011.*

Species-Habitat Mapping Methodology

Some of the chosen species, by virtue of their having special conservation status, had already been the subject of detailed habitat mapping in the project area. For others, simple conceptual models were developed based upon literature reviews.

The southwestern willow flycatcher is a genetically distinct subspecies (Paxton 2000) of willow flycatcher that inhabits the woody riparian corridors of the desert southwest. Its population has declined significantly because of habitat loss, and it is listed as endangered by the States of Colorado and New Mexico as well as under the Federal Endangered Species Act. The willow and cottonwood riparian habitats necessary for willow flycatcher breeding in the San Luis Valley have been mapped in detail as part of the development of the draft San Luis Valley Habitat Conservation Plan for that species (ERO Resources, unpublished data). The data also capture the gallery cottonwood habitat needed for both the Lewis' woodpecker in this portion of its range and for the breeding habitat of the yellow-billed cuckoo. The existing data were used as core habitat in this prioritization scheme; as a second priority, a 200-meter buffer was used to minimize disturbance of the core habitat (Terry Ireland, USFWS Ecological Services, personal communication, February 2012). These priorities are illustrated in Figure 5.

Canada lynx are federally listed as threatened and State listed in Colorado as endangered. Lynx range through the montane forests of the Rocky Mountains. They are resident in both the San Juan and Sangre de Cristo Mountains, and the junction between the Sangre de Cristo Range and the Culebra Range of the Sangre de Cristo Mountains has been identified as a particularly important corridor for the species (L. Ellwood, USFWS Ecological Services Colorado Field Office, personal communication, January 2012). Its habitat in the project area has already been mapped by Colorado Parks and Wildlife and the U.S. Forest Service. A small portion of the project area in northern New Mexico had not been covered by previous mapping but is known to be actively used by lynx. Therefore,

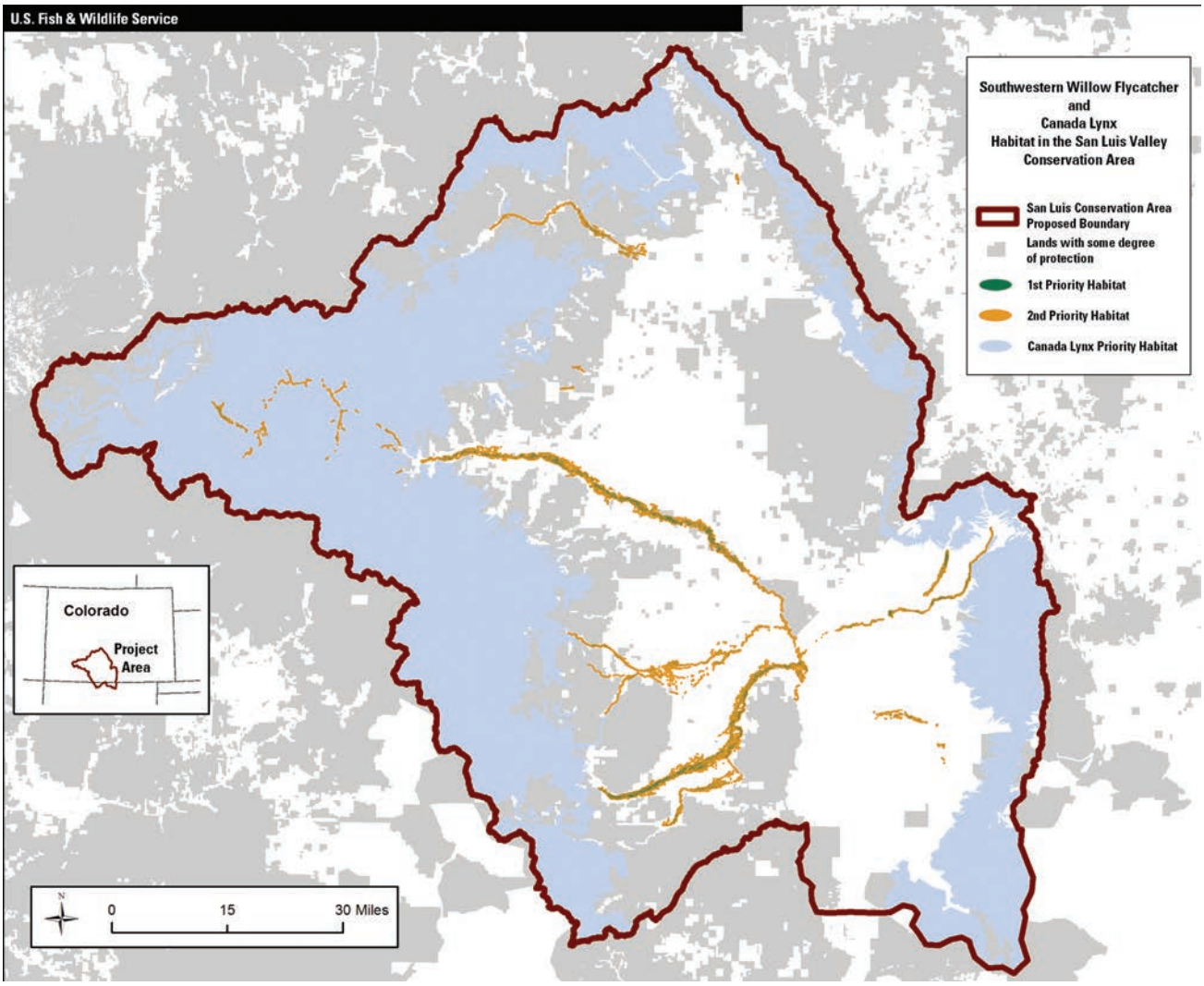

Figure 5. Southwestern Willow Flycatcher and Canada Lynx Habitat in the San Luis Valley Conservation Area.

a minimum convex polygon for this region was created that captured the land cover that largely comprises the Colorado Parks and Wildlife habitat (Rocky Mountain aspen forest and woodland, Rocky Mountain lodgepole pine forest, Southern Rocky Mountain mesic montane mixed conifer forest and woodland, and Rocky Mountain subalpine dry-mesic spruce-fir forest and woodland) using 30-meter Landfire data (USGS 2010). Lynx habitat is identified in Figure 5.

The habitat of the Endangered Species Act candidate Rio Grande cutthroat trout has been mapped throughout the species' range; in addition, information on barriers to fish passage and data on genetic integrity has incorporated into a spatial database. Because interbreeding has been a problem for cutthroat trout species, the signatory parties to the 2009 Rio Grande Cutthroat Trout Conservation Agreement identified populations with less than 10 percent genetic introgression and defined them as conservation populations (Rio Grande Cutthroat Trout Conservation Team 2009). These conservation populations were chosen as representing priority habitat for the species in this land protection plan (Figure 6).

The range of the Gunnison sage-grouse is much more geographically limited than it once was. The Gunnison Sage-Grouse Steering Committee revised earlier, coarser-scale historic range mapping for the species (Schroeder et al. 2004) and identified current and suitable but unoccupied habitat (Gunnison Sage-grouse Rangewide Steering Committee 2005). In the project area, there is a small lek at Poncha Pass, and some adjacent suitable but unoccupied habitat. There is also a large expanse of vacant and/or unknown habitat identified in Costilla County. Current range polygons were selected to represent priority habitat for this species; the historic range is also displayed for reference. (Figure 7).

The San Luis Valley represents a regionally important breeding habitat for the Wilson's phalarope (Scott Miller, San Luis Valley NWR Complex, personal communication, January 2012) as well as habitat for many other species of migratory shorebirds. Because

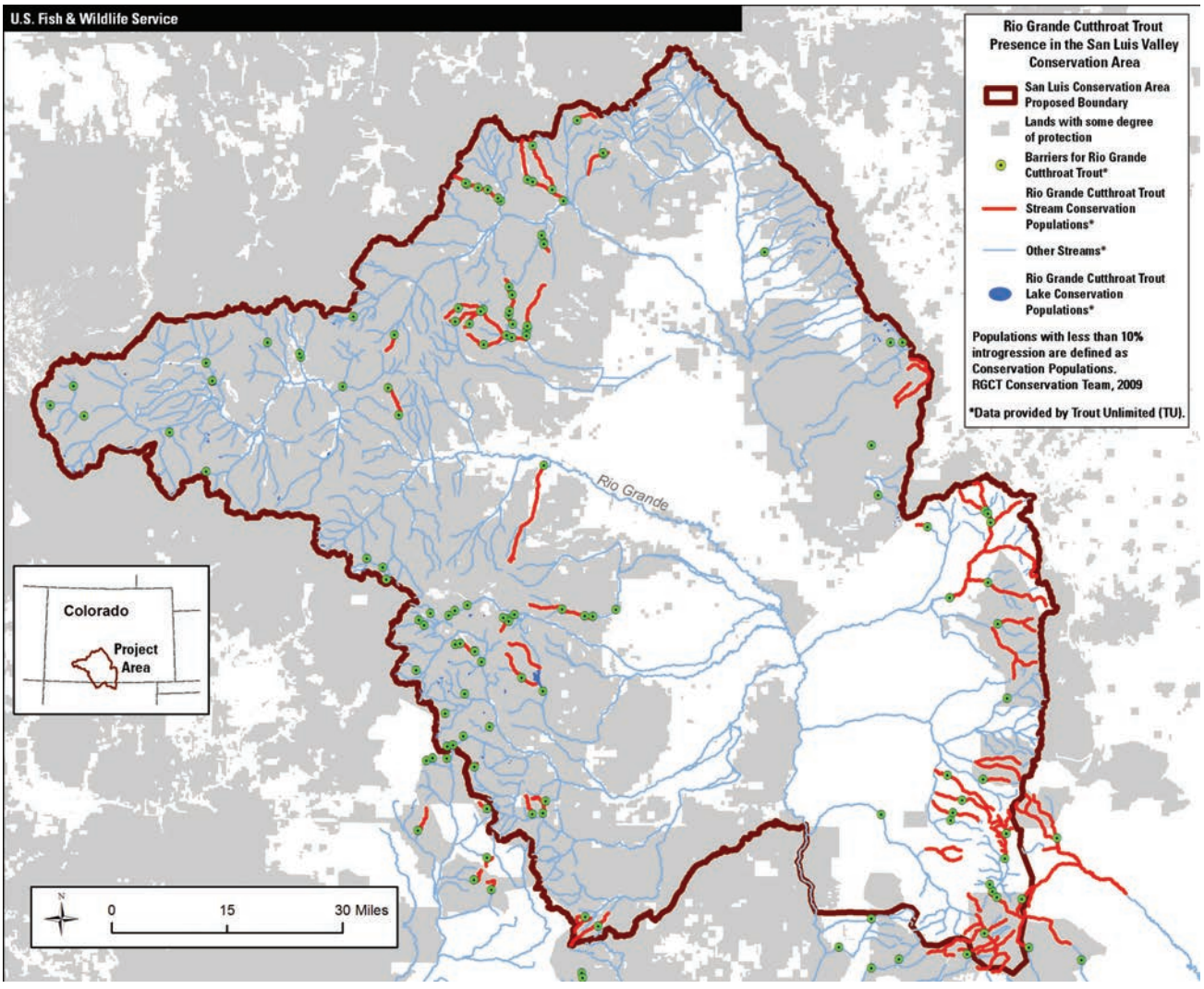

Figure 6. Rio Grande Cutthroat Trout Presence in the San Luis Valley Conservation Area.

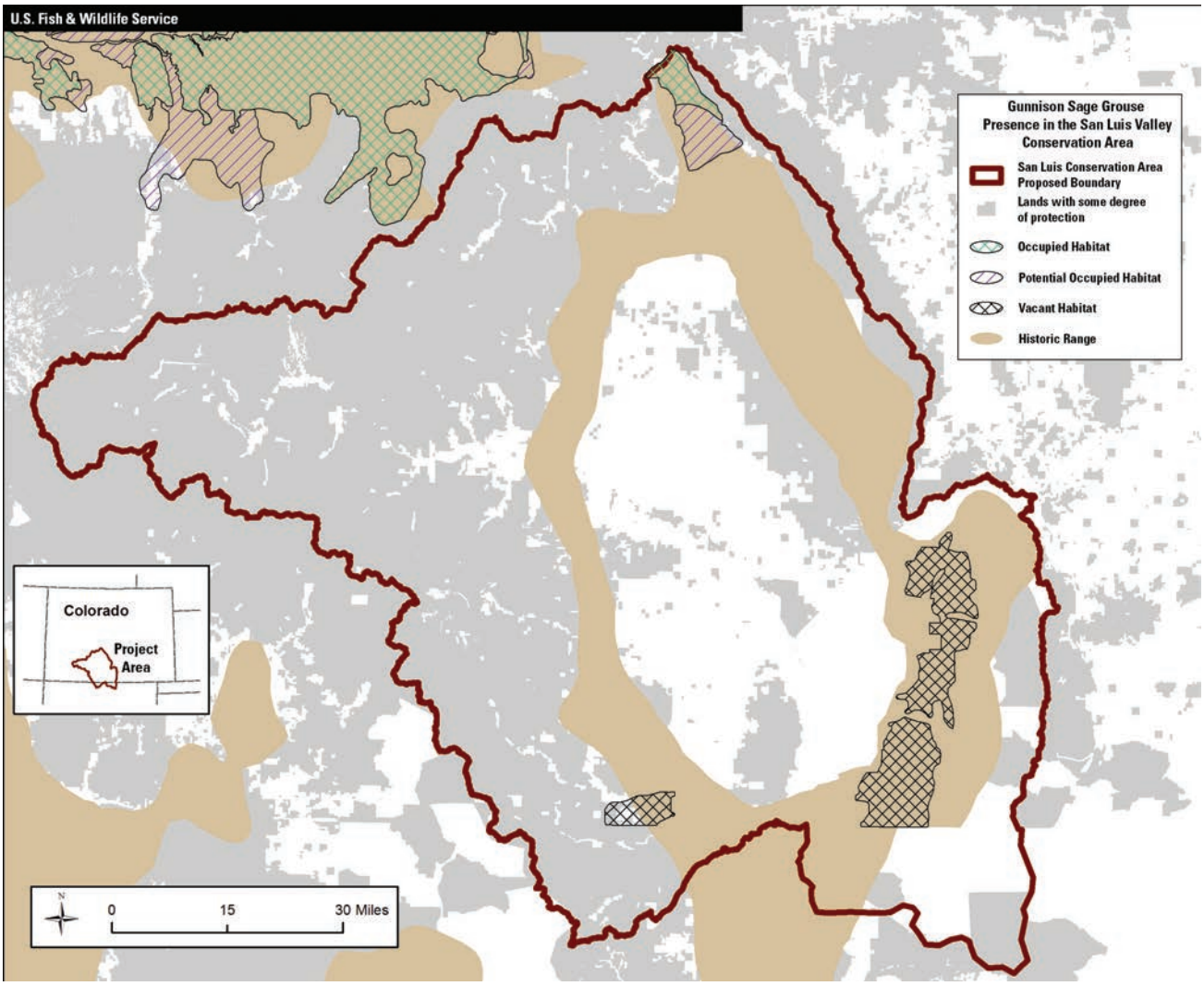

Figure 7. Gunnison Sage Grouse Presence in the San Luis Valley Conservation Area.

an applicable statistical or conceptual model for migratory shorebird breeding in the Southern Rockies was unavailable, a conceptual model based on published habitat associations of Wilson's phalarope was developed. A study of waterbird nesting in the San Luis Valley found that phalaropes preferred seasonal and short emergent wetlands, probably because these habitats have the highest invertebrate biomass of the habitats available to them (Laubhan and Gammonley 2000). Wetlands classified by the National Wetland Inventory as temporary and seasonal were given the highest priority, followed by areas of saturated soils, as these wetland classes most closely match the definitions of seasonal and short emergent. Because Wilson's phalaropes are known to be sensitive to encroachment by woody vegetation (Cunningham and Johnson 2006), wetlands in the first and second priority classes were downgraded to third priority if they occurred within 100 meters of woody vegetation. In Colorado, Wilson's phalaropes typically breed in intermountain valleys between 7,000 and 10,000 feet (Kingsley 1998); however, USFWS Division of Migratory Birds staff believe that most breeding likely occurs below 8,000 feet (S. Jones, USFWS Migratory Birds, personal communication. February 24, 2012), and so more conservative criteria were used for characterizing important phalarope habitat in the SLVCA (Figure 8).

The secretive American bittern is an important representative species for a suite of waterbirds in the project area. Like the Wilson's phalarope, neither San Luis Valley-specific habitat mapping nor applicable modeling from elsewhere were available. A review of American bittern biology demonstrates that the species will nest in a wide variety of wetland and associated upland types (Dechant et al 2004). However, research has consistently shown a preference for tall, dense cover (Duebbert and Lokemoen 1977, Riffell et al. 2001), particularly bulrush- and cattail-dominated wetlands (Azure 1998; Bent 1963; Brininger 1996; Faanes 1981, as cited in Dechant et al. 2004; Weber 1978, Weber et al. 1982). They are also found occasionally in wet meadows (Faanes 1981), particularly those

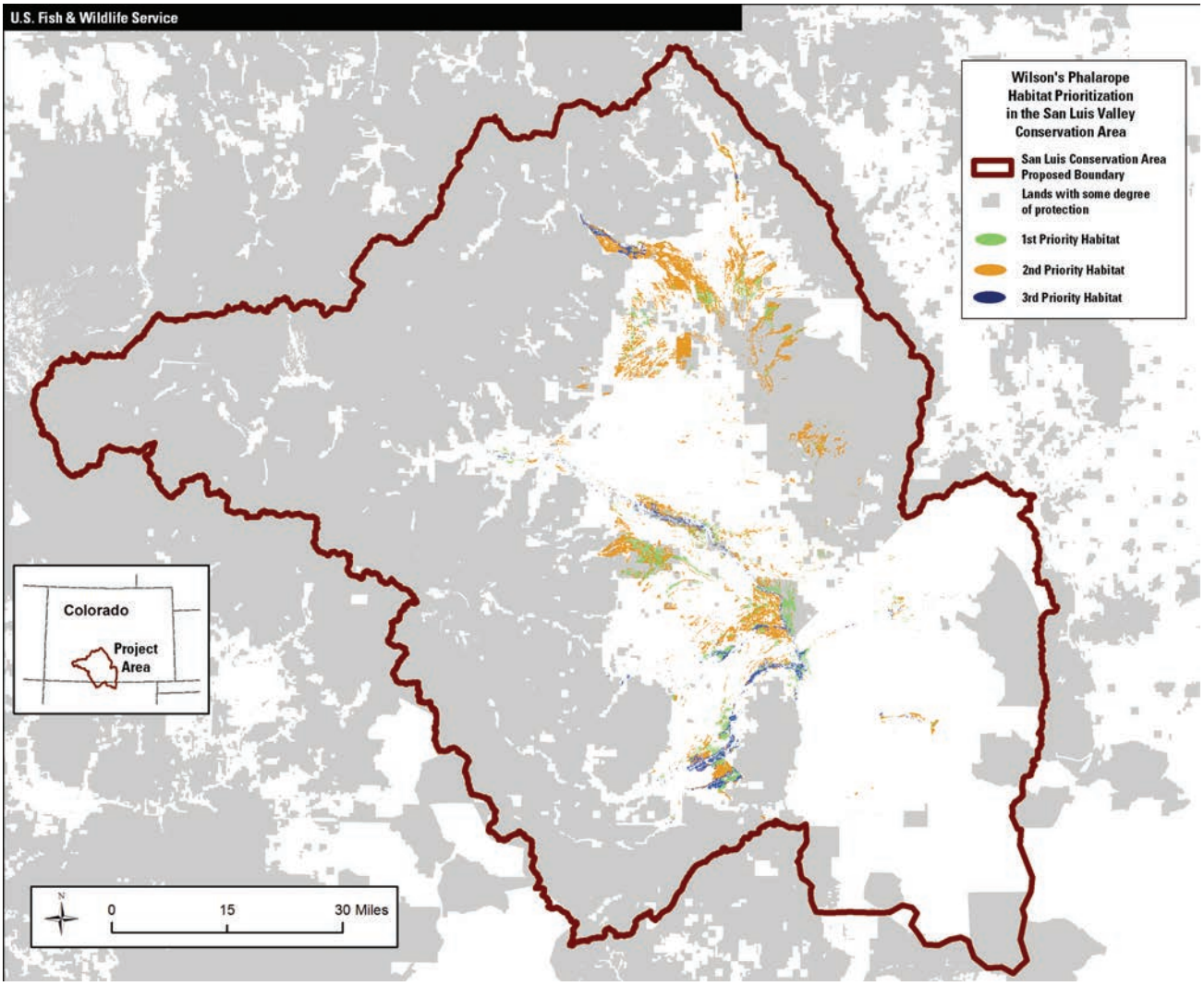

Figure 8. Wilson's Phalarope Habitat Prioritization in the San Luis Valley Conservation Area..

with some cattails (Middleton 1949). Therefore, wetlands that were classified by the National Wetlands Inventory as permanent, semipermanent, or seasonal (those with a tall emergent vegetation component) were selected as the highest priority for American bitterns. Because bitterns are area sensitive (Brown and Dinsmore 1986, Riffel et al. 2001) and prefer wetlands of greater than 3 hectares (Daub 1993, as cited in Dechant et al. 2004), that area was used as a threshold delimiting tall emergent wetlands of first and second priority. Temporary and saturated wetlands, which are often wet meadows, were designated as third priority. In Colorado, American bitterns are residents of marshes between 3,500 and 8.000 feet (Bailey and Niedrach 1967), so the latter elevation was used to constrain bittern habitat in the SLVCA. These priorities are illustrated in Figure 9.

Sage thrasher is a migratory bird that has been declining throughout its range due to habitat loss and degradation, and is a Service Region 6 bird of conservation concern as well as a Migratory Birds focal species. A range-wide conceptual model for the species was developed by the American Bird Conservancy based on Rocky Mountain Bird Observatory sampling data (Beason, Levad, and Leukering 2005) and ReGap land cover data. The population estimates they assign to these land cover classes are further stratified based on the classification of vegetation quality as good, fair, or poor, which was in turn derived from shrub cover density and prevalence of invasive plants. In the absence of data on vegetation quality for the San Luis Valley, the "fair" quality was selected for all land cover types. The model developers determined that Inter-Mountain Basins Big Sagebrush Shrubland, Inter-Mountain Basins Montane Sagebrush Steppe, and Colorado Plateau Mixed Low Sagebrush Shrubland would support, on average, 0.0528252 birds per acre; this group of vegetation types was selected as the first priority in the sage thrasher-specific map (Figure 10). Inter-Mountain Basins Mixed Salt Desert Scrub, Inter-Mountain Basins Greasewood Flat, and Inter-Mountain Basins Semi-Desert Shrub Steppe support

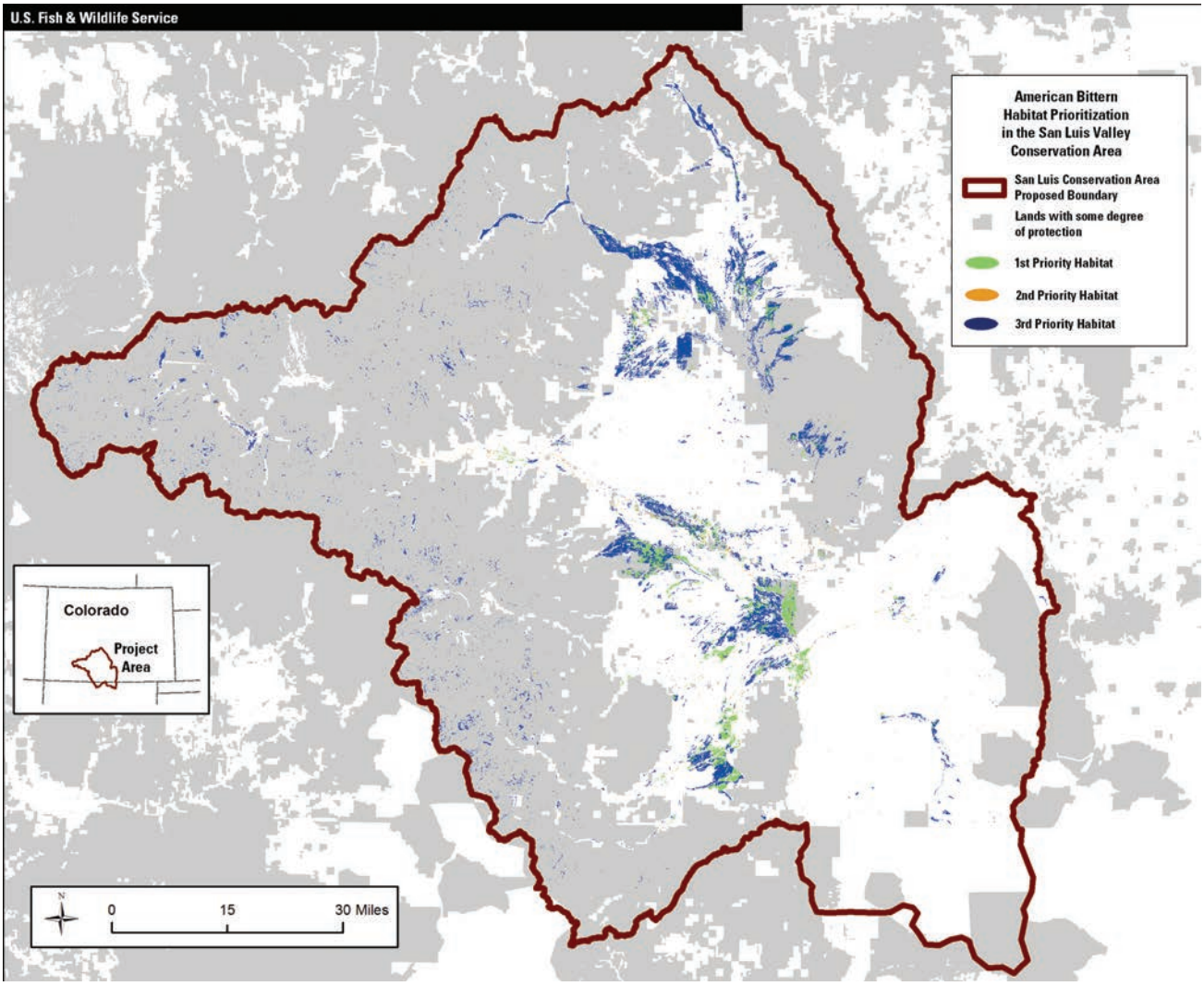

Figure 9. American Bittern Habitat Prioritization in the San Luis Valley Conservation Area.

0.009348 birds per acre; these vegetation classes were selected as the second priority for the species. Within these two priority levels, only polygons greater than 100 hectares in area were included because sage thrasher are known to be somewhat area sensitive and are found most commonly in patches of that size or greater (Knick and Rotenberry 1995).

Landscape Prioritization

The species-specific maps are useful for determining where in the landscape the key habitats are for the identified focal species. However, they do not assist decision makers with determining which areas would provide the most effective conservation returns overall. In addition to the presence or absence of habitat for individual species, it is important to take into account issues such as connectivity, cost, and unequal conservation need for each species. Therefore, the simulated-annealing algorithm implemented in the software package Marxan (Ball, Possingham, and Watts 2009) was used to identify "optimal" solutions for conservation prioritization within the SLVCA. Marxan permits the user to specify individual conservation targets for conservation features (in this case, area of focal species habitat) and species-specific penalties on models that do not meet conservation targets. This allows the user to individually weight features (e.g., upweight penalties for not including enough habitat for species of higher conservation concern, or reduce the amount of land necessary for generalist widespread species). By designating a boundary length modifier, the user can generate a more compact reserve system. The landscape can also be classified by cost, which can be made as simple as land area or more complex and meaningful by accounting for variables like land costs or metrics of the human footprint.

Because of the degree of flexibility allowed by Marxan, the values for these parameters need to be optimized by successive iterations of the program. For this analysis, hexagonal planning units were selected, as these have been shown to result in less fragmented, more efficient reserve networks (Nhancale

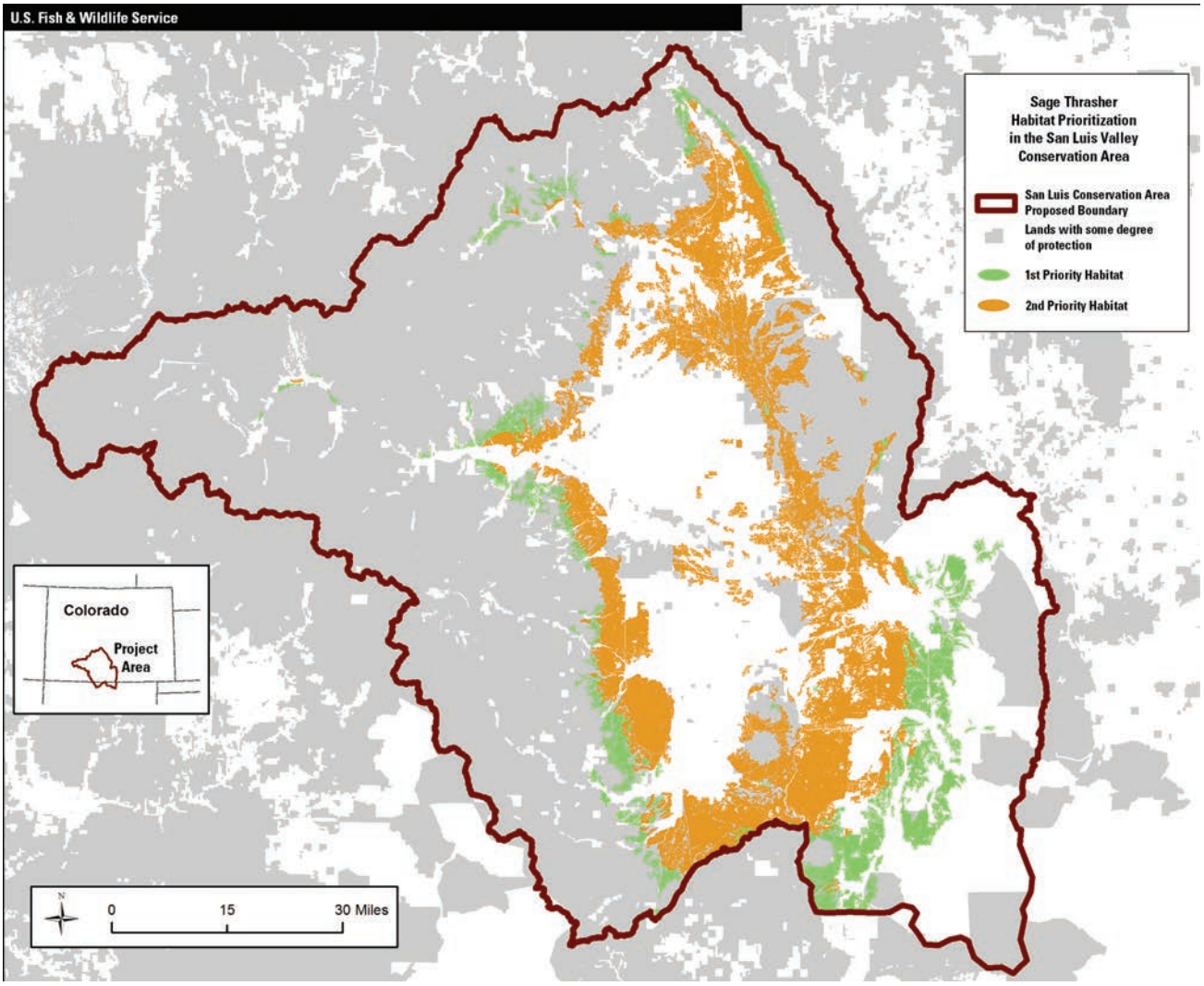

Figure 10. Sage Thrasher Habitat Prioritization in the San Luis Valley Conservation Area.

and Smith 2011). Hexagons were 25 hectares in area, which provides resolution that is sufficient for making land protection decisions while covering the SLVCA in few enough planning units to not be computationally overwhelming. Hexagons already in a permanent protected status were excluded from the model as that status is not likely to change. A boundary length modifier of 0.0001 was used to create a slightly more compact reserve network. Increasing that value to 0.001 oversimplified the reserve network and did not meet the intent of the SLVCA. Targets for protection were set at 50 percent of the private land holding a particular conservation feature. The relative irreplaceability, or frequency with which individual hexagons were selected in the final solution for each of the 100 models, is shown in Figure 11.

Evaluation of Easement Potential

As described in section 1.5, acquisition of conservation easements is not a new tool for achieving conservation objectives within the SLVCA; the NRCS and many nongovernmental organizations hold tens of thousands of acres of easements in the valley. The Service does not currently hold easements in the project area; however, the Service has more than 50 years of experience acquiring conservation easements in other parts of the country.

The landscape modeling described above has generated maps of species-specific conservation priorities for each of the priority species, as well as a consensus map that shows where conservation returns for Federal funds would be maximized for the suite of species examined. Biologists and realty specialists will work cooperatively to use these tools to identify parcels whose conservation will result in the greatest benefit to trust species.

When a willing seller approaches the Service or if the Service wishes to proactively seek out sellers, the following criteria will guide the Service's decision making:

- *Overall conservation value* – Is the property located, in whole or in part, in an area that was selected in

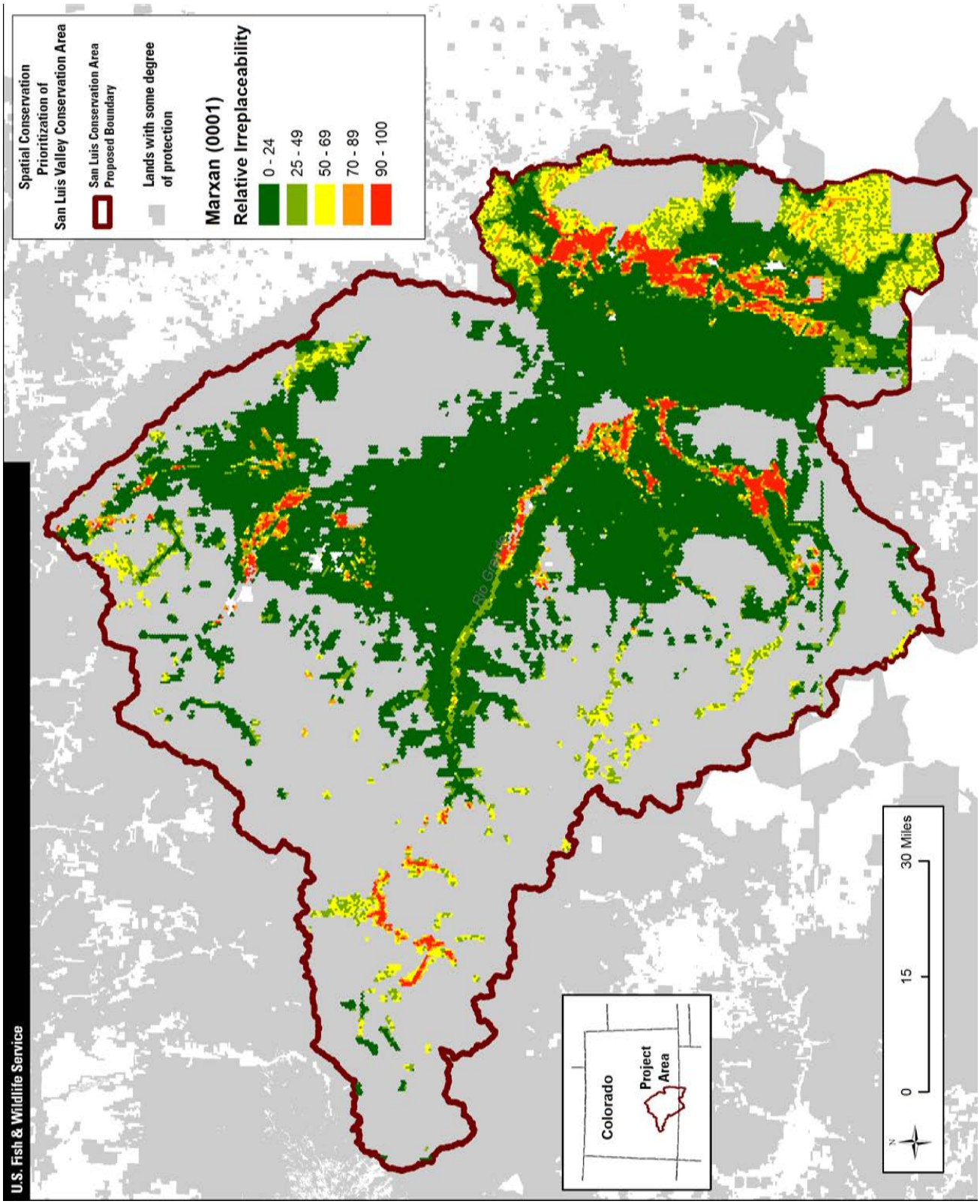

Figure 11. Areas of overall conservation need. Relative irreplaceability indicates what proportion of models in which that particular conservation unit was selected.

70 percent or more of the spatial conservation priority runs in Marxan, as indicated by Figure 11?

- *Trust species value* – Does the parcel contain priority habitat that was identified in any of the species-specific maps in section 4.3?
- *Previously unidentified conservation value* – If neither of the preceding thresholds are reached, is there another compelling reason (for example securing of important water rights, promoting critical habitat connectivity, identification of new species of conservation concern, simplified management of an existing refuge unit, or donation of intact or easily restored habitat) which justifies the property's protection?

Nothing in these guidelines is intended to limit the appropriate exercising of discretion and professional judgment by realty specialists and refuge staff. Acquisition would comply with realty policy and potential acquisitions would be subject to scrutiny to determine that the habitat for which the property was identified as a priority is, in fact, present on the parcel. As mentioned in the third criterion, there may also be additional reasons why acquisition of interest in a parcel is justified, even if it did not rank highly in models for selected priority trust species at the time that this plan was approved.

Ecosystem Management and Landscape Conservation

To carry out the project, the Service will engage the Southern Rockies Landscape Conservation Cooperative, which is intended to deliver applied science to inform resource management decisions on landscape-scale issues such as climate change. The Landscape Conservation Cooperative incorporates State, Federal, nonprofit, and university partners; this planning across agency jurisdictions and boundaries is necessary to ensure that conservation happens at the scale necessary to ensure that wildlife can adapt, migrate, and colonize new areas in response to environmental change. The Southern Rockies Landscape Conservation Cooperative is still in its formative stages, but the framework for collaborative conservation in its area of responsibility, including the SLVCA, has been developed.

Incorporating Science and Strategic Habitat Conservation in the SLVCA

The SLVCA encompasses 5.2 million acres in a region where demand for conservation easements already far exceeds available funding. Given the likelihood that there may be more land available for conservation easements than appropriated funding, it is important to ensure that the money that is available is spent in a way that maximizes returns for trust species and/or helps ensure the connectivity, resiliency, and long-term function of the ecosystems in the project area. Toward this end, the SLVCA will incorporate the elements of strategic habitat conservation. Strategic habitat conservation is based on an adaptive management framework and entails starting with strategic conservation planning, followed by conservation design, conservation delivery, and monitoring/research to assess results.

Strategic Biological Planning

Biological planning requires the identification of specific biological objectives or focal species so that the relative success of a strategy can be assessed following implementation. The focal species identified to guide prioritization of the SLVCA were chosen because of the Service's obligations to them as Federal trust species (candidate, threatened, and endangered species and migratory birds), and because land protection undertaken to benefit these species is likely to have conservation benefits for other species of conservation concern, such as species that are federally or State listed as threatened or endangered, USFWS Region 6 Birds of Conservation Concern, and USFWS Migratory Birds focal species. For example, protection of cottonwood riparian habitat for Lewis' woodpecker, a conspicuous regional bird of conservation concern, may also protect habitat for the more elusive yellow-billed cuckoo, an Endangered Species Act candidate species. Because of a lack of systematic nesting surveys for these species in the project area, assumptions were made based on scientific literature and expert opinion regarding which types of habitat were important for maintaining viable populations of the focal species. In particular, given the limited amount of quality wetland and riparian habitat present compared to pre-settlement conditions, it was assumed that the continued presence of those riparian types was a limiting resource in the life history of species that are thought to be obligate breeders in such habitat.

These focal species were chosen with the knowledge that there are gaps in existing data and that the habitat in the project area is likely to evolve over time in the face of environmental change and changes in human water use. As new data become available or as conditions change to the point that this conservation strategy is no longer effective, biological planning will be revisited.

Conservation Design and Delivery

Preventing loss of habitats identified for the diverse suite of focal species is the goal of the prioritization scheme outlined in section 4.3. Decisions regarding how to rank competing parcels with limited available funds will follow the outline described in that section.

The recovery plan for southwestern willow flycatcher requires a minimum of 50 occupied breeding territories in the San Luis Valley (USFWS 2002), and specific reaches of the Rio Grande and Conejos River were identified to maintain that level.[2] As previously discussed, this habitat will be granted highest priority for land protection, and all easement opportunities within the priority lands for that species should be considered in the interest of providing redundancy to currently occupied habitat.

In the absence of specific population goals for the remaining focal species, no acreage numbers or breeding pair densities have been selected. Following the principle that between 25 and 75 percent of a region must be conserved to meet targets for biodiversity (Noss et al. 2012), the initial targets for easement delivery are to protect 50 percent of existing priority habitat that currently exists on private lands for the other focal species. As survey data for the valley informs the role of the SLVCA in meeting specific regional or continental population objectives for other species, the delivery of easement and limited fee-title acquisition can be adjusted accordingly.

Monitoring and Research

Essential to the success of strategic habitat conservation is an effective monitoring program to ensure that conservation delivery is resulting in net positive benefits for the focal species around which the project was designed. While the consensus conservation model is primarily meant to guide effective easement acquisition, the individual species maps are intended to guide conservation delivery for those species. Monitoring of populations will help ensure the efficacy of the program; if negative population trends for those species are detected within the project area or at a regional or continental scale, then further literature review and/or targeted research can be applied to adjust conservation planning for the SLVCA. Some of the monitoring phase of strategic habitat conservation can be carried out using the capacity of the refuge biologist and Service Inventory and Monitoring assistance. However, it is important to recognize that similar monitoring will be carried out by partner agencies, and communication among these agencies is crucial for effective monitoring in the face of limited personnel and financial resources. Further, Service staff should leverage biological expertise at regional academic institutions in order to facilitate basic and applied research while addressing research gaps as they are identified.

Specifically, monitoring and research should include:

- Developing, improving, and assessing landscape models for priority species. Emphasis will be placed on the highest priority species with the greatest degree of uncertainty regarding limiting factors and the effectiveness of management actions, including acquisition under the SLVCA program, at minimizing and reducing the limiting factors for those species. Data from existing surveys such as the nine Breeding Bird Survey routes in the project area will be evaluated and incorporated into spatial models. When necessary, additional data will be collected to evaluate assumptions used in the modeling process and assessments will be adjusted accordingly. These methods will provide an estimate of the population response of trust species on easement lands and on non-easement properties. Similar modeling approaches may be developed or incorporated for priority nontrust species in cooperation with partners such as State wildlife agencies, nongovernmental organizations, and universities.
- Evaluating assumptions and addressing uncertainties identified through the biological planning, conservation design, and conservation delivery elements. When warranted, assumptions such as increased redundancy of occupied southwestern willow flycatcher habitat through protection of riparian vegetation will be evaluated.
- Identifying appropriate population goals for priority species and assessing the contribution of land protection toward meeting the population goals. This will allow the Service and conservation partners to evaluate the contribution of the program to meeting the population goals and refine conservation delivery to ensure maximum effectiveness.
- Determining how changing environmental conditions may influence the effectiveness of this conservation design as increased evaporation, social and economically driven changes in water use, and evolution of the type and timing of precipitation and runoff influence the hydrology of the SLVCA.

Socioeconomic Considerations

As discussed in detail in section 3.4 of the EA in this volume, the population in the project area is relatively low. Much of the land is cropland or rangeland. Landownership patterns vary widely, from dense 5- to 10-acre parcel subdivisions to ranches of more than 90,000 acres. Some facets of the agricultural economy are likely to be challenged by new ground water augmentation laws. The potential infusion of capital from the SLVCA conservation easement program may provide farmers with resources to invest that would allow them to continue operation. That money will largely

2 FR 76(157): Endangered and Threatened Wildlife and Plants: Designation of Revised Critical Habitat for Southwestern Willow Flycatcher. pp. 50542-50629

be invested within the San Luis Valley, so there will be short-term benefits to the local economy as well. Local governments are supportive of the initiative for these reasons, and because the program is largely easement-based and therefore should not significantly impact revenues.

Because the wildlife resources for which the SLVCA was designed already occur in these agricultural lands, sustaining this cornerstone of the regional economy is important to the mission of the Service. Maintaining these practices will also preserve the rural aesthetic which defines the region's culture and the character of the San Luis Valley.

Public Involvement and Coordination

Scoping

At the beginning of the planning process, the planning for the SLVCA was conducted in tandem with that for the San Luis Valley Refuge Complex CCP. Public scoping meetings were held on March 29, 2011, in Alamosa, Colorado; March 30, 2011, in Monte Vista, Colorado; and March 31, 2011, in Moffat, Colorado. The scoping meetings were attended by approximately 50 people, many of whom provided input for the scoping process. Additionally, 14 written comments were received from organizations and members of the public. A press event and public meeting was held at Adams State College in Alamosa, Colorado, on January 4, 2012, at which the Secretary of the Interior, Ken Salazar, organized the presentation of several complementary initiatives for the San Luis Valley and Sangre de Cristo Mountains. One of these initiatives was landscape-scale conservation, which the Director of the Service presented as being embodied by the SLVCA. Questions were answered and comments taken at a breakout session following the main meeting. The meeting was attended by over 300 members of the public.

Together, these meetings and subsequent feedback helped the Service to identify the questions and concerns of the public, as well as to refine the project boundary.

Distribution and Availability

Copies of the Land Protection Plan and Environmental Assessment were sent to Federal and State legislative delegations, tribes, agencies, landowners, private groups, and other interested individuals. Additional copies of the document are available from the following offices and contacts:

U.S. Fish and Wildlife Service
Region 6 Division of Refuge Planning
P.O. Box 25486-DFC
Denver, CO 80225
303/236 8132
<http://mountain-prairie.fws.gov/planning/lpp.htm>

U.S. Fish and Wildlife Service
San Luis Valley National Wildlife Refuge Complex
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